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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/964,693	09/28/2001	Kenji Watanabe	Q66444	2941

7590 12/19/2005
SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC
2100 Pennsylvania Avenue, N.W.
Washington, DC 20037

EXAMINER

KRUER, KEVIN R

ART UNIT	PAPER NUMBER
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1773

DATE MAILED: 12/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/964,693

Applicant(s)

WATANABE ET AL.

Examiner

Kevin R. Kruer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even-if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2, 19-21, 23 and 24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2, 19-21, 23 and 24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 26, 2005 has been entered.

Specification

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 2, 19-21, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP20001192520A (herein referred to as Watanabe'520) in view of Yoshizumi (US 4,431,764).

Watanabe'520 teaches a molded material consisting of a flame retardant vinyl chloride resin molded material. The molded material may comprise a substratum (herein understood to read on the claimed "base layer") and a surface layer (herein

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relied upon to read on the claimed "intermediate layer") on at least one side thereof (paragraph 0153). The substratum comprises 100pbw vinyl chloride based resin having a degree of chlorination of from 58-73% (0153). Said substratum may comprise a zinc or tin fire retardant (00153). The amount of fire retardant utilized should be controlled in order to obtain the desired transparency (00132). Since said teaching is silent with regards to the addition of titanium dioxide to said substratum and since the laminate is taught to be transparent, it is herein understood said substratum is "free of any titanium compound." Said substratum layer is taught to preferably have a thickness of 2-14mm (0151). The surface layer comprises 100pbw vinyl chloride based resin that has a chlorination degree of 56% (0153). The surface layer has a thickness of 0.4-2mm (paragraph 0153). Since said teaching is silent with regards to the addition of titanium dioxide to said surface layers and since the laminate is taught to be transparent, it is herein understood said surface layers "free of any titanium compound." The molded material is utilized in semiconductor fabrication machines and equipment.

Watanabe'520 does not teach that the molded object may be coated on one side with an antistatic composition. However, Yoshizumi teaches an antistatic coating composition comprising tin oxide (abstract) that is coated onto nonconductive coatings that need antistatic properties (col 1, lines 11+). The tin oxide is dispersed in a binder resin such as vinyl chloride or a thermosetting resin (col 2, lines 41+). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the coating taught in Yoshizumi onto the substrate taught in Watanabe'520.

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The motivation for doing so would have been to provide the substrate with antistatic properties.

With respect to the chlorination degree of the intermediate layer claimed in claim 2 and the chlorination degree of the antistatic layer claimed in claim 19, the references do not teach the claimed chlorination content of the vinyl chloride binders. However, Watanabe'520 teaches that the chlorination degree of a polymer will affect its fire resistance, thermal stability, and moldability. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to control the chlorination degree of the vinyl chloride binder of the intermediate and antistatic layers. The motivation for doing so would have been to control the laminate's moldability, thermal stability, and fire resistance.

With regards to claim 24, neither reference teaches the desired thickness of the antistatic layer. However, Yoshizumi teaches the thickness of an antistatic layer will vary depending upon the required antistatic effect, coating strength and other requirements (col 4, lines 31+). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to vary the thickness of the antistatic layer taught by Yoshizumi. The motivation for doing so would have been to control the required antistatic effect, coating strength and other requirements of the laminate.

5. Claims 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP20001192520A (herein referred to as Watanabe'520) in view of Holley (US 5,508,343).

Watanabe'520 teaches a molded material consisting of a flame retardant vinyl chloride resin molded material. The molded material may comprise a substratum (herein understood to read on the claimed "base layer") and a surface layer (herein relied upon to read on the claimed "intermediate layer") on at least one side thereof (paragraph 0153). The substratum comprises 100pbw vinyl chloride based resin having a degree of chlorination of from 58-73% (0153). Said substratum may comprise a zinc or tin fire retardant (00153). The amount of fire retardant utilized should be controlled in order to obtain the desired transparency (00132). Since said teaching is silent with regards to the addition of titanium dioxide to said substratum and since the laminate is taught to be transparent, it is herein understood said substratum is "free of any titanium compound." Said substratum layer is taught to preferably have a thickness of 2-14mm (0151). The surface layer comprises 100pbw vinyl chloride based resin which has a chlorination degree of 56% (0153). The surface layer has a thickness of 0.4-2mm (paragraph 0153). Since said teaching is silent with regards to the addition of titanium dioxide to said surface layers and since the laminate is taught to be transparent, it is herein understood said surface layers "free of any titanium compound." The molded material is utilized in semiconductor fabrication machines and equipment.

Watanabe'520 does not teach that the molded object may be coated on one side with an antistatic composition. However, Holley teaches an antistatic composition comprising a water-soluble polymer, a titanate, and an ammonium salt (abstract). The composition is coated on substrates (col 2, lines 47+) such as object utilized in the production of semiconductor electronics (col 1, lines 14+) in order to prevent damage

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that can be caused by static build-up (col 1, lines 27+). NOTE: the molded objects of Watanabe can be utilized in equipment to make semiconductors. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to coat the molded object taught in Watanabe '520 with the anti-static composition taught in Holley. The motivation for doing so would have been to prevent damage to semiconductor electronics that could come in contact with said object.

With respect to the chlorination degree of the intermediate layer claimed in claim 2, Watanabe does not teach the claimed chlorination content of the vinyl chloride binder. However, Watanabe'520 teaches that the chlorination degree of a polymer will affect is fire resistance, thermal stability, and moldability. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to control the chlorination degree of the vinyl chloride binder of the intermediate layers. The motivation for doing so would have been to control the laminate's moldability, thermal stability, and fire resistance.

6. Claims 2 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP20001192520A (herein referred to as Watanabe'520) in view of JP 11353947A(herein referred to as Sakai).

Watanabe'520 teaches a molded material consisting of a flame retardant vinyl chloride resin molded material. The molded material may comprise a substratum (herein understood to read on the claimed "base layer") and a surface layer (herein relied upon to read on the claimed "intermediate layer") on at least one side thereof (paragraph 0153). The substratum comprises 100pbw vinyl chloride based resin having

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a degree of chlorination of from 58-73% (0153). Said substratum may comprise a zinc or tin fire retardant (00153). The amount of fire retardant utilized should be controlled in order to obtain the desired transparency (00132). Since said teaching is silent with regards to the addition of titanium dioxide to said substratum and since the laminate is taught to be transparent, it is herein understood said substratum is "free of any titanium compound." Said substratum layer is taught to preferably have a thickness of 2-14mm (0151). The surface layer comprises 100pbw vinyl chloride based resin which has a chlorination degree of 56% (0153). The surface layer has a thickness of 0.4-2mm (paragraph 0153). Since said teaching is silent with regards to the addition of titanium dioxide to said surface layers and since the laminate is taught to be transparent, it is herein understood said surface layers "free of any titanium compound." The molded material is utilized in semiconductor fabrication machines and equipment.

With respect to the chlorination degree of the intermediate layer claimed in claim 2, the references do not teach the claimed chlorination content of the vinyl chloride binder. However, Watanabe'520 teaches that the chlorination degree of a polymer will affect is fire resistance, thermal stability, and moldability. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to control the chlorination degree of the vinyl chloride binder of the intermediate layers. The motivation for doing so would have been to control the laminate's moldability, thermal stability, and fire resistance

Watanabe'520 does not teach that the molded object may be coated on one side with an antistatic composition. However, Sakai teaches a transparent antistatic resin

molding that comprises a transparent antistatic layer of thermoplastic resin having thickness of 0.15-3.5um in which an entangling ultra-fine long carbon fiber 2-15 wt.% is included in a surface of a transparent thermoplastic base material. The light transmittance is more than 60% and the haze is not more than 20% (abstract). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to surface coat the molding taught in Watanabe'520 with the antistatic layer taught in Sakai. The motivation for doing so would have been to obtain the desired antistatic properties and maintain the transparency of the laminate.

Response to Arguments

Applicant's arguments with respect to the pending claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin R. Kruer whose telephone number is 571-272-1510. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'K R K' with a stylized flourish at the end.

Kevin R. Kruer
Patent Examiner-Art Unit 1773